

What is claimed is:

[Claim 1] A safety system for a host vehicle comprising:

a voice sensor detecting voice signals from at least one vehicle occupant;
an occupant classifier determining a state of mind of said at least one vehicle occupant; and
a controller performing a safety countermeasure in response to said state of mind comprising transmitting said state of mind to at least one target vehicle.

[Claim 2] A system as in claim 1 wherein said voice sensor is in the form of at least one microphone.

[Claim 3] A system as in claim 1 wherein said occupant classifier determines said state of mind in response to at least one of voice signal frequency and voice signal amplitude.

[Claim 4] A system as in claim 1 wherein said occupant classifier determines and profiles said at least one vehicle occupant in response to historical data and threshold excursion data.

[Claim 5] A system as in claim 1 further comprising a speech classifier identifying said at least one vehicle occupant in response to at least one speech characteristic associated with said voice signals, said controller performing at least one vehicle related task in response to said voice signals and said identification.

[Claim 6] A system as in claim 5 wherein said speech classifier in monitoring said at least one speech characteristic monitors a vehicle occupant identifiable and associated speech characteristic.

[Claim 7] A system as in claim 6 wherein said vehicle occupant identifiable and associated speech characteristic comprises at least one speech irregularity.

[Claim 8] A system as in claim 7 wherein said at least one speech irregularity comprises at least one of a speech impediment, a speech disorder, a lisp, and an accent.

[Claim 9] A system as in claim 1 wherein said controller assesses a collision threat using spheroidal partitioning in response to said state of mind.

[Claim 10] A vehicle voice control system comprising:

a voice sensor detecting voice signals from at least one vehicle occupant;
a speech classifier monitoring at least one speech characteristic comprising a vehicle occupant identifiable and associated speech characteristic in response to said voice signals and associating said voice signals with at least one vehicle related task in response thereto; and

a controller performing said at least one vehicle related task in response to said voice signals and said association.

[Claim 11] A system as in claim 10 wherein said speech classifier comprises an n-dimensional analysis tool to determine a voice command.

[Claim 12] A system as in claim 10 wherein said speech classifier comprises learning algorithms that store vehicle occupant speech identification and behavioral characteristic related information.

[Claim 13] A system as in claim 12 wherein said behavioral characteristic related information comprises at least one of speech amplitude, frequency, and tone, in relation to vehicle status, vehicle operating conditions, and vehicle environmental situations.

[Claim 14] A system as in claim 10 wherein said speech classifier comprises a manual classifier.

[Claim 15] A system as in claim 14 further comprising a manual input device for term identification associated with a verbal statement.

[Claim 16] A system as in claim 10 wherein said speech classifier comprises at least one spectral filter filtering said voice signal to identify said at least one vehicle occupant.

[Claim 17] A system as in claim 10 wherein said vehicle related tasks are selected from at least one of a vision system task, a safety system task, a navigation system task, telematic system task, a climate control task, a communication system task, an audio system task, a video system task, and a vehicle status determination task.

[Claim 18] A system as in claim 10 wherein said speech classifier adaptively alters speech identification and behavioral characteristic related information and generates an occupant relational/history database.

[Claim 19] A method of performing a safety countermeasure within a host vehicle comprising:

detecting voice signals from at least one vehicle occupant;
monitoring at least one speech characteristic in response to said voice signals including a vehicle occupant identifiable and associated speech characteristic;
identifying said at least one vehicle occupant;
determining a state of mind of said at least one vehicle occupant in response to said voice signals and said identification; and
performing the safety countermeasure in response to said state of mind comprising transmitting said state of mind to at least one target vehicle.

[Claim 20] A method as in claim 19 further comprising invoking a manual training session when a voice command is not recognized.